



## SEQUENCE LISTING

RECEIVED

MAY 22 2002

TECH CENTER 1600/2900

&lt;110&gt; MERKULOV et al.

<120> ISOLATED HUMAN TRANSPORTER PROTEINS,  
NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,  
AND USES THEREOF

&lt;130&gt; CL001103

&lt;140&gt; 09/777,921

&lt;141&gt; 2001-02-07

&lt;160&gt; 126

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 2673

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1

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Arg Thr Ser Thr Ala Pro Leu Asp Arg Leu Lys Val Met Met Gln Val
210          215          220
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tgggaccatg ttgcgctggc tgcgggactt cgtgctgccc accgcggcct gccaggacgc 540
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g 601

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<210> 40
<211> 601
<212> DNA
<213> Homo sapiens

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ggaccatggt gcgctggctg cgggacttct tgctgcccac cgcggcctgc caggacgcgg 480
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c 601

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<210> 41
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 41
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c 601

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<210> 42
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 42
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gattgtaaag ggatcctgag atcaaaaagc ttgagaattg ctgctgtatc accattttta 300
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t 601

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<210> 43
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<212> DNA
<213> Homo sapiens

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tgaaattcct tttcatttcc tgtcttagtc catttagtgt tgctatagtg gaatatctga 540
gacagggtaa tttataaaga aaagacattt atttagctca cagttccgca ggctgggaag 600
t 601

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<210> 44
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 44
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tgagggaact aattcagttc catgagagag agaactcact cactactgca agaatacaca 540
caagccattc atgagggatc tgccctccgta accctgacac ctctgctag gtccctcctc 600
c 601

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<210> 45
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 45
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tgctaggtcc ctctcccaa cacggccaca tcagggatca gacttcaaca tgagtttttg 420
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gattgcatta	tgcctaccca	tttgggtgagg	gcagtcttct	ttaattgggt	tactgattca	540
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<210> 46  
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 <212> DNA  
 <213> Homo sapiens

<400> 46						
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tgagggaact	aattcagtc	catgagagag	agaactcact	cactactgca	agaatgacac	180
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<210> 47  
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 <212> DNA  
 <213> Homo sapiens

<400> 47						
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gcacatgcc	ccacacctgg	ttaacttttg	tattttctag	tagagatggg	attttgccat	300
kttggtcagg	ctggctctga	attcctggcc	tctagtgatc	tgctgcctc	tgctctgaa	360
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tcagacatgt	tatggtttct	ggcacaatat	taagaagaca	tgatatgaaa	tcacagggtg	480
aatttttaggg	catcacaca	gaaagattat	ggtataagaa	aaacaatgga	attccaacta	540
catttctgtc	aaatgttcta	aaatatataa	aatctgtatc	ttttgtgttc	tctcctgatt	600
t						601

<210> 48  
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 <212> DNA  
 <213> Homo sapiens

<400> 48						
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gcgattcttg	tgctcagcc	tccaagcag	ctgagattac	aggcacatgc	caccacacct	180
gggttaacttt	tgtattttct	agtagagatg	ggattttgcc	atgttggtca	ggctgggtctt	240
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ctggcacaat	attaagaaga	catgatatga	aatcacaggg	tgaatttttag	ggcatcacaa	420
cagaaagatt	atgggtataag	aaaaacaatg	gaattccaac	tacattttctg	tcaaatgttc	480
taaaatatat	aaaatctgta	tcttttgtgt	tctctcctga	tttatattct	aaatttgatg	540
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<210> 49  
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 <212> DNA  
 <213> Homo sapiens

<400> 49  
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 tctgaaagaa tgaaaaaat ggaagaattc tttagtaagg tataaaatac cttttctatc 240  
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 a 601

<210> 50  
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 <212> DNA  
 <213> Homo sapiens

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 taacttcttt tgacctgct gagttcaaaa atcttatctt ttttaaggatt gaatggagtc 180  
 caccaaggta tctatatattg acaggattta tgaaaacaaa aggatttggt gagaaagttt 240  
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 tggtaagacc taccagtaa cttagcataa atagtaaatt cattcattta atgttttcaa 480  
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 a 601

<210> 51  
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 <212> DNA  
 <213> Homo sapiens

<400> 51  
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 acaaaaggat ttgttgagaa agtttgaaag ctaactctga aacgtggatc atagtgttta 240  
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 taggtctgtg tgtgtgtgta ggtgcatggg gaataaaaaa taataagcaa ataataagaa 600  
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<210> 52  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 52  
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<210> 53  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 53  
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 a 601

<210> 54  
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 <212> DNA  
 <213> Homo sapiens

<400> 54  
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<210> 55  
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<212> DNA

<213> Homo sapiens

<400> 55

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<210> 56

<211> 601

<212> DNA

<213> Homo sapiens

<400> 56

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g 601
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<210> 57

<211> 601

<212> DNA

<213> Homo sapiens

<400> 57

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g 601
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<210> 58

<211> 601

<212> DNA

<213> Homo sapiens

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<210> 59  
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<212> DNA  
<213> Homo sapiens

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vttgtcgtgt taagatacaa aagcaataac tttttattgt gaaaatagtc tgtttttgaa 360  
caatatattg ttttgTTTT tctgtgaaa gttgagaaac taaatatacg aagagataat 420  
ggtcagacca taaataaaaa tagaactttg actcaaaatt tacagcagtc tgcccagaaa 480  
accagccctt tatctaaaat aaacagacca ggaaaccagc ctgttatgtc agacttatag 540  
gaagtcaggt tgctatctct agagacaata cacaaagcta tgcaataact gctgtaacag 600  
c 601

<210> 60  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 60  
tacaggcggtg agccaccatg cgcccagcca tagactatat atTTTTgatc tgataactgg 60  
ttcagctact aagtgactaa caggcaagta gcatctatag tgtggatatg ctggacaaaa 120  
ggacattcac ctctgggca ggatggcaca gaatgttgag agatTTTTatc atgctactca 180  
gaatgggtgt caatttaaaa cttatgagtt gtttgTTTTc ggagTTTTcc atttaatagt 240  
tcagaccatg gattgaccgc aggtaactga aactgtggag agtgaaaactg tggataagg 300  
rggactattg tattgttaag tcagactcat taggcaatca taactcttga tttgccatca 360  
gaaatgctgc agaaatatgg gttaaaaaaa actgttcaaa aataggggtca gggatgtcct 420  
ttaacttggt acttccaaaa tgttagtga aactgtggcc ccaaagagtg aaaggaacaa 480  
atgactaaga gaaaatcttg ttttcaggat gacagattaa aaaagaagca acttgctgaa 540  
acactgaaaa tctctccact tgtaagataa cacaaaactg gctaaaactg gttggaatga 600  
a 601

<210> 61  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 61



```

ataggggtcag ggatgtcctt taacttggtta cttccaaaat gttagtgaaa actgtggccc 60
caaagagtga aaggaacaaa tgactaagag aaaatcttgt tttcaggatg acagattaaa 120
aaagaagcaa cttgctgaaa cactgaaaat ctctccactt gtaagataac acaaaactgg 180
ctaaaactgg ttggaatgaa tatggccaac tcaagtctgc acagaactaa cttggtgatg 240
ttacagccca aatttccacc acatatttta tactaactcc ccccggattt tcacacatga 300
yctgtgaggt agcatgaaga ggtaactatg catgcctaag gacttggggag acctccccat 360
ttccttccac caatcaccca ctaatcccag aatccgcccc caaacctttt ctaataacta 420
ccttaaagcc agcatagggg gacagatttg agctggactc ctgtcttctt gtgggtcacc 480
ttgcaataaa aagcttttct tttctcaaca cctggtatta tagtattgac ttctagtcca 540
tcgggcagca agcccccttt ggtcggtgac tattcttgtt cgctgatatt tccattggcc 600
a 601

```

<210> 62  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 62
actaatccca gaatccgccc ccaaaccttt tctaataact accttaaagc cagcataggg 60
agacagattt gagctggact cctgtcttct tgtgggtcac cttgcaataa aaagcttttc 120
ttttctcaac acctggtatt atagtattga cttctagttc atcgggcagc aagccccctt 180
tggtcgggtga ctattcttgt tcgctgatat ttccattggc caaaatataa acctcttaga 240
tgaaacttca gtacgtaaat ggcgccacag aatgctgtga ctttttctc ttggattata 300
rcaggttact ttactgaata ccgtaggcag ttataacaca ctaagtattt gtgtatctaa 360
acatagaaaa gatacagtaa aaatatggta atttttttca acttttagtt gagatttgga 420
gggtatgtgc acatttggtt caagggtata ttgcatgatg ctgaggtttg gggtaacaatt 480
gaaccctgtc acccaggtag tgagcatagt acccaatcga taatttttca acccttgtcc 540
attccctccc cgttcttgta gtccccagtt tctgcttttc ccacttttat atccgtgtgc 600
a 601

```

<210> 63  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 63
ctcaacacct ggtattatag tattgacttc tagttcatcg ggcagcaagc cccttttggt 60
cggtgactat tcttggtcgc tgatatttcc attggccaaa atataaacct cttagatgaa 120
acttcagtac gtaaatggcg ccacagaatg ctgtgacatt tttctcttgg attatagcag 180
gttactttac tgaataccgt aggcagttat aacacactaa gtatttgtgt atctaaacat 240
agaaaagata cagtaaaaat atggtaattt ttttcaactt ttagttgaga tttggagggg 300
rtgtgcacat ttgttacaag ggtatattgc atgatgctga ggtttggggg acaattgaac 360
cctgtcaccc aggtagttag catagtaccc aatcgataat ttttcaaccc ttgtccattc 420
cctccccgtt cttgtagtcc ccagtttctg cttttcccat ctttatatcc gtgtgcaccc 480
catgttttgc tcccatgtgt atgtgagaac ttgtggtgtt tggttttcta tttctgcgtt 540
gattcgctta ggataatggc cttcagctgc atccatgttg ctgcagagga cgtgatttta 600
t 601

```

<210> 64  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 64
aggagtttat caattttatt agtcttttca aagaaccatc ttttggcttt gttaatcctc 60
ccaatgggtg gttttctttc tcattacttt ttgctcttta tttccttcaa cttctttttt 120

```

```

gcttaatttt aaaataattt cttgagattg agataagcct caatgatggg tcaccgattt 180
ccagtctttc ttcttttcta attatgcatt ttaaaccaga aatctttctc taagtgtagc 240
tttagttgca gtcacaaagt ttcagatctg tctctcagtc tggagggttg agatctgacc 300
rtgacatga aaccatccag tcacaatgtg gcattatatt ttttaatttt tttttttttt 360
ttgagataga gtttctactct tattgcctag gctgggtgtgc aatgggtgcga tctcgggtca 420
cagcaacctc cacctcccag gttcaagcga ttcttttgcc tcagcctccc aagtagctgg 480
gattacaggc atgcgccacc atgcccact aattttgtat ttttagtaga gatgggggtt 540
ctccatgttg gtcagggttg tcttgaactc ccgacctcag gtgatccgcc cacctcagcc 600
t 601

```

<210> 65  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 65
gtggcattat tggttcatat ttttattttt tagacttcct taatgcaaaa catatacagt 60
tgatcctcat tatttgggga ttctgtattt gcaaatgtgc ctactcaata aaatttatcc 120
ccaaagtaac cccaaaatat atactcacag tactttccca ggcattcatg gacatgcaca 180
gagcagtga aaacttgagt tgctcagcat gtacattcct agctagtaga ataaggcaat 240
actctgcctt cttgtttcag ctctcactat attactagc aagtatccct ttcaaggctc 300
rttttgtgcc agtttttgca tttttgtatt tttgttggtt atttcctttt taaaatgttc 360
cccaaaggta gtgctgaagt gctgtctagt gttcctaagt gcaagaaagc catagcatgc 420
cttatggaga aaatatatgc gttggataag ctttgcccca aattcaatgt tagtgaatca 480
acagcacaca ttaaatgagg tgccctcaaa cagaaacaga cataagacat gggttatgtat 540
taatcagttg atgaaagtgt tgtaatcaga ggctcacagg aacctaacct tgtttttcct 600
g 601

```

<210> 66  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 66
ctcacagtac tttcccaggc attcatggac atgcacagag cagtgaaaaa cttgagttgc 60
tcagcatgta cattcctagc tagtagaata aggcaatact ctgccttctt gtttcagctc 120
tcatactatt aactagcaag tatccctttc aagggtctatt ttgtgccagt ttttgcattt 180
ttgtattttt gttggtaatt tcctttttta aatgttcccc aaaggtagtg ctgaagtgtc 240
gtctagtgtt cctaagtgca agaaagccat agcatgcctt atggagaaaa tatatgcgtt 300
kgataagctt tgccccaat tcaatgttag tgaatcaaca gcacacatta aatgaggtgc 360
cttcaaacag aaacagacat aagacatggg tatgtattaa tcagttgatg aaagtgttgt 420
aatcagaggc tcacaggaac ctaaccctgt ttttcctgta ggaacaatgg tttggatttt 480
gctaattcag tgtttgcaat gaatatagaa ctttatggaa gatgattgct gtgaataatg 540
agaattaacc atatctcttt aagagtgcac ttctaaagga gaattattcag aagggtattt 600
g 601

```

<210> 67  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 67
tcagcatgta cattcctagc tagtagaata aggcaatact ctgccttctt gtttcagctc 60
tcatactatt aactagcaag tatccctttc aagggtctatt ttgtgccagt ttttgcattt 120
ttgtattttt gttggtaatt tcctttttta aatgttcccc aaaggtagtg ctgaagtgtc 180
gtctagtgtt cctaagtgca agaaagccat agcatgcctt atggagaaaa tatatgcgtt 240

```

```

ggataagctt  tgcccaaat  tcaatgttag  tgaatcaaca  gcacacatta  aatgagggtgc  300
sttcaaacag  aaacagacat  aagacatggg  tatgtattaa  tcagttgatg  aaagtgttgt  360
aatcagaggc  tcacaggaac  ctaaccctgt  ttttctgtga  ggaacaatgg  tttgggtattt  420
gctaattcag  tgtttgcaat  gaatatagaa  ctttatggaa  gatgattgct  gtgaataatg  480
agaattaacc  atatctcttt  aagagtgcac  ttctaaagga  gaatattcag  aaggggtattt  540
gcataatttc  tttactaaca  gatgctgcct  ctcactgtcc  ttacatgggc  cagatttctca  600
t                                                    601

```

```

<210> 68
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 68
tctctcagaa  tctgtcatc  tcttccaggg  tcttttctcc  aagaaagtct  atcctttcac  60
cactaacagt  aattttgggc  ttcctctttt  tctggagaag  tcagctgttt  atgctgcttc  120
agcaccagac  cctctcttac  tttgttttgt  ttcattcttt  ttcattgtaca  gtagtcttag  180
gattctcatg  agcctgtgag  ctgctagaag  gaaatacagc  agtgcttaca  tttattgctt  240
ctattttatt  ttctattttc  tcttctgtgc  ttctgattgt  tctccttctg  tccacaaaca  300
ygctctaatt  tccctagtat  taaaaatttt  ctgtcttttg  ttgttctttt  atccttgctc  360
ccttattttt  actgccagat  ttttattttt  atttatttat  ttttgagatg  gagtctcact  420
ctgtcaccca  ggctgggggt  cagtggcgcg  atctcagctc  actgcaacct  ccgcctccca  480
gcttcaagca  attttctctt  ttttagcctc  caagtagctg  ggattatggg  caccctgccac  540
catgcctggc  tgatttttct  attttttagta  gagacggggg  ttcaccatgt  tggccacact  600
g                                                    601

```

```

<210> 69
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> T may be either present or absent

```

```

<400> 69
cactctgtca  cccaggctgg  ggtgcagtgg  cgcgatctca  gctcactgca  acctccgcct  60
cccagcttca  agcaattttc  ctcttttagc  ctcccaagta  gctgggatta  tgggcacctg  120
ccaccatgcc  tggctgattt  ttctattttt  agtagagacg  gggtttcacc  atgttgacca  180
cactgctctc  taactgctga  cctcagggtga  accacccgcc  tcagcctcca  aaagtgtcgg  240
gattgcaggc  gtgagtcact  gtgcctggcc  ttttactgcc  agatttttaa  aagaatagtc  300
tgtgctttag  ctctattttc  tcatttacta  cttctcttta  actcagtcat  atatgatgtt  360
ttgcatagta  aatgtctagt  aatttattaa  aaatgtagaa  ataggctact  ttaaaatgaa  420
tagatcctac  ttttaattgaa  tttatcttgg  agttagaata  tcttgatttg  gatttttagtt  480
ctgctacttc  ttaattacat  tacttggtaa  ggccacttgt  gaagtcagtc  tctttggagg  540
aatattattt  atctataagg  ctgttacaat  tactgaattt  taaaaaatgt  gtatttattt  600
t                                                    601

```

```

<210> 70
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 70
tagtaattta  ttaaaaatgt  agaaataggc  acttttataa  tgaatagatc  ctactttaat  60

```

```

tgaatttatac ttggagttag aatatcttga tttggatttt agttctgcta cttcttaatt 120
acattacttg gtaaggccac ttgtgaagtc agtctctttg gaggaatatt atttatctat 180
aaggctgtta caattactga attttaaaaa atgtgtattt attttttaat gtatttggtta 240
catttttagt attgatgttg ggatagggcat ttaagcaagt ctataactca cctacatgca 300
yaattttgcc ttaatcagtt taaagctttc tcttaaatga gagatttgaa attcataatt 360
tctgtgggtt ttatcagttc tgagttttat tttttgccct ttttattttt ttaaaggaaa 420
aattgaggct tcagaaattg tccagttctt ccagacactg ggtctgacta tttctgaaca 480
acaagcagag ttgattcttc aaaggtaagc tcttcatgtt ggtcaacaat tgactttcac 540
tttaatatcc tgcattagaa ctctgtgttt gtaagtgtgg ctttaaaaca cctccctagt 600
c 601

```

<210> 71  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 71
gagttagaat atcttgattt ggatttttagt tctgctactt ctttaattaca ttacttggtta 60
aggccacttg tgaagtcagt ctctttggag gaatattatt tatctataag gctgttacia 120
ttactgaatt ttaaaaaatg tgtatttatt ttttaaatga tttgttacat ttttagtatt 180
gatgttggtg taggcattta agcaagtcta taactcacct acatgcataa ttttgcctta 240
atcagtttaa agctttctct taaatgagag atttgaaatt cataatttct gtgggttctta 300
ycagttctga gttttatttt ttgccctttt tattttttta aaggaaaaat tgaggcttca 360
gaaattgtcc agtctctcca gacactgggt ctgactattt ctgaacaaca agcagagttg 420
attcttcaaa ggtaagctct tcatgttggt caacaattga ctttcacttt aatatcctgc 480
attagaactc tgtgtttgta agtgtggctt taaaacacct ccctagtctt cattatgtat 540
atccaagatc tttttgtctt ttttctctcc attcattttg tatgtgtaca tttatctaaa 600
g 601

```

<210> 72  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 72
gtattgatgt tgggataggc atttaagcaa gtctataact cacctacatg cataattttg 60
ccttaatcag tttaaagctt tctcttaaag gagagatttg aaattcataa tttctgtggg 120
tcttatcagt tctgagtttt attttttgcc ctttttattt ttttaaagga aaaattgagg 180
cttcagaaat tgtccagttc ctccagacac tgggtctgac tatttctgaa caacaagcag 240
agttgattct tcaaaggtaa gctcttcatg ttgggtcaaca attgactttc actttaatat 300
yctgcattag aactctgtgt ttgtaagtgt ggcttttaaaa cacctcccta gtcttcatta 360
tgtatatcca agatcttttt gtcttttttc ctcccattca ttttgatatgt gtacatttat 420
ctaaagtgtg agaatgggaa gtgtaagctc agactggact ctttctttca aggccctaaa 480
ggatagtggg atggcaggaa gtaaggtttt aactccatag atgaggagct gaagagtttt 540
ggtgttgctt tttctccatt tgattttctaa tgtgacagta aaactcattg attcaaaacta 600
a 601

```

<210> 73  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

```

<400> 73
cattgattca aactaagaag actagcagat tcatcacatt atttaacctg gatgtgactg 60
gaaaaaaggg aaattactaa gctctccaag ctaacaaaga aatacctgtt taaactttca 120
gaaaacagaa atgcaaattt gaaccttatt gtctggggca atcagtttga ctattttaagt 180

```

```

cagactttta tactcttaat gttttgtttc atgggataga gcagtaatct ctgcagccca 240
ggtgctctca aatactctgt tgctataaac acagggcagg aactgatttt ttatgataac 300
rtaaaacaga aaaggacaat tatattgtat taatattggt gtgaatattt tcagtcctca 360
cattgtctaa aaatctttct aaatggcttt gttattgaat ttatctcatt ttatatctgt 420
gccaacagca ttttcatcct ttctcttcat aatttctttt acaaacagct gctcaagagg 480
aaggctcaaa gtctcaaggc tgagcacgta atgacttttg ttagtactag atgagaaggg 540
ctttcctgag gaaatgaaaa cctaaaacat gaaaagaaga taaacagaat ttggacagtg 600
a                                                                 601

```

```

<210> 74
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> 'A' may be either present or absent

```

```

<400> 74
aaactaagaa gactagcaga ttcatacat tatttaacct agatgtgact ggaaaaaagg 60
gaaattacta agctctccaa gctaacaaag aaatacctgt ttaaactttc agaaaacaga 120
aatgcaaat tgaaaccttat tgtctggggc aatcagtttg actattttaag tcagactttt 180
atactcttaa tgttttgttt catgggatag agcagtaatc tctgcagccc aggtgctctc 240
aaatactctg ttgctataaa cacagggcag gaactgattt tttatgataa cgtaaacag 300
aaaaggacaa ttatattgta ttaatatgtt tgtgaatatt ttcagtcctc acattgtcta 360
aaaatctttc taaatggctt tgttattgaa tttatctcat tttatatctg tgccaacagc 420
attttcatcc tttctcttca taatttcttt tacaacagc tgctcaagag gaaggctcaa 480
agtctcaagg ctgagcacgt aatgactttt gttagtacta gatgagaagg gctttcctga 540
ggaaatgaaa acctaaaaca tgaaaagaag ataaacagaa tttggacagt gagatataga 600
g                                                                 601

```

```

<210> 75
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 75
cagaaatgca aatttgaacc ttattgtctg gggcaatcag tttgactatt taagtcagac 60
ttttatactc ttaatgtttt gtttcatggg atagagcagt aatctctgca gccaggtgc 120
tctcaaatac tctgttgcta taaacacagg gcaggaactg attttttatg ataacgtaaa 180
acagaaaagg acaattatat tgtattaata ttgttggtgaa tattttcagt cctcacattg 240
tctaaaaatc tttctaaatg gctttgttat tgaatttatc tcattttata tctgtgccaa 300
yagcattttc atcctttctc ttcataattt cttttacaaa cagctgctca agaggaaggc 360
tcaaagtctc aaggctgagc acgtaatgac ttttgtagt actagatgag aagggtttc 420
ctgaggaaat gaaaacctaa aacatgaaaa gaagataaac agaatttgga cagtgaagata 480
tagagcatat aatattctgc ttctaaagta atattcttct aggaaagtga gggcgtttcc 540
ctggctgtta ggccagaaat catattccta tattttcttt gatagcttta ggaataatgc 600
a                                                                 601

```

```

<210> 76
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>

```

<221> variation  
 <222> (301)...(301)  
 <223> T may be either present or absent

<400> 76  
 tgaaccttat tgtctggggc aatcagtttg actatttaag tcagactttt atactcttaa 60  
 tgttttgttt catgggatag agcagtaatc tctgcagccc aggtgctctc aaatactctg 120  
 ttgctataaa cacagggcag gaactgattt tttatgataa cgtaaaacag aaaaggacaa 180  
 ttatattgta ttaatattgt tgtgaatatt ttcagtcctc acattgtcta aaaatctttc 240  
 taaatggctt tgttattgaa tttatctcat tttatatctg tgccaacagc attttcatcc 300  
 tttctcttca taatttcttt tacaacacagc tgctcaagag gaaggctcaa agtctcaagg 360  
 ctgagcacgt aatgactttt gttagtacta gatgagaagg gctttcctga ggaaatgaaa 420  
 acctaaaaca tgaaaagaag ataaacagaa tttggacagt gagatataga gcatataata 480  
 ttctgcttct aaagtaatat tcttctagga aagtgagggc gtttccctgg ctgttaggcc 540  
 agaaatcata ttctatatatt ttctttgata gctttaggaa taatgcaaatt tctaagccca 600  
 a 601

<210> 77  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> variation  
 <222> (301)...(301)  
 <223> C, T, or neither (single base deletion) may be present.

<400> 77  
 gaaccttatt gtctggggca atcagtttga ctatttaagt cagactttta tactcttaat 60  
 gttttgtttc atgggataga gcagtaatct ctgcagccca ggtgctctca aatactctgt 120  
 tgctataaac acagggcagg aactgatttt ttatgataac gtaaaacaga aaaggacaat 180  
 tatattgtat taatattgtt gtgaatattt tcagtcctca cattgtctaa aaatctttct 240  
 aaatggcttt gttattgaat ttatctcatt ttatatctgt gccaacagca ttttcatcct 300  
 ytctcttcat aatttctttt acaaacagct gctcaagagg aaggctcaa gtctcaaggc 360  
 tgagcacgta atgacttttg ttagtactag atgagaaggg ctttcttgag gaaatgaaaa 420  
 cctaaaacat gaaaagaaga taaacagaat ttggacagtg agatatagag catataatat 480  
 tctgcttcta aagtaatat cttctaggaa agtgagggcg tttccctggc tgtaggccca 540  
 gaaatcatat tcctatatatt tctttgatag ctttaggaat aatgcaaatt ctaagcccaa 600  
 g 601

<210> 78  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> variation  
 <222> (301)...(301)  
 <223> C may be either present or absent

<400> 78  
 accttattgt ctggggcaat cagtttgact atttaagtca gacttttata ctcttaatgt 60  
 tttgtttcat ggggatagag agtaatctct gcagcccagg tgctctcaaa tactctgttg 120  
 ctataaacac agggcaggaa ctgatttttt atgataacgt aaaacagaaa aggacaatta 180  
 tattgtatta atattgttgt gaatattttc agtcttcaca ttgtctaaaa atcttttcta 240

```

atggccttctgt tattgaatttt atctcattttt atatctgtgc caacagcatt ttcaccccttt 300
ctcttcataaa tttctttttac aaacagctgc tcaagaggaa ggctcaaagt ctcaaggctg 360
agcacgtaat gacttttctgt agtactagat gagaagggtt ttcctgagga aatgaaaacc 420
taaaacatga aaagaagata aacagaatttt ggacagtgcg atatagagca tataatattc 480
tgcttctaaa gtaatattct tctaggaaag tgaggggcgtt tccctggctg ttaggccaga 540
aatcatattc ctatattttt tttgatagct ttaggaataa tgcaaattct aagcccaagc 600
t 601

```

```

<210> 79
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 79
atattttcag tcttcacatt gtctaaaaat ctttctaaat ggctttgtta ttgaatttat 60
ctcattttat atctgtgccg acagcatttt catcctttct cttcataatt tctttttacaa 120
acagctgctc aagaggaagg ctcaaagtct caaggctgag cacgtaatga cttttgttag 180
tactagatga gaagggtttt cctgaggaaa tgaaaacctt aaacatgaaa agaagataaa 240
cagaatttgg acagtgcgat atagagcata taatattctg cttctaaagt aatattcttc 300
haggaaagtg aggggcgttt cctggctgtt aggccagaaa tcatattcct atattttctt 360
tgatagcttt aggaataatg caaattctaa gcccaagctt cagaatagac taagaagtat 420
tagcttagct gccatgacaa aataccatag gctggatgca ttaaacaatg gaaatttagt 480
ttttcacagg tctgggagct gggaagttaa agatgagagt gccagcatgg ttgggttgta 540
gtgagggtct tctttctggc ttgcagatag accccttctc actgtattgt catatggcag 600
a 601

```

```

<210> 80
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 80
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aaggctcaaa gtctcaaggc tgagcacgta atgacttttg ttagtactag atgagaaggg 180
ctttcctgag gaaatgaaaa cctaaaacat gaaaagaaga taaacagaat ttggacagtg 240
agatatagag catataatat tctgcttcta aagtaatatt cttctaggaa agtgagggtg 300
kttccctggc tgttaggcca gaaatcatat tcttatattt tctttgatag ctttaggaat 360
aatgcaaat ctaagcccaa gcttcagaat agactaagaa gtattagctt agctgccatg 420
acaaaatacc ataggctgga tgcattaaac aatggaaatt tagtttttca cagggtctggg 480
agctgggaag tttaagatga gaggccagc atgggtgggt tgtagtgagg gctctctttc 540
tggtctgcag atagaccctt tctcactgta ttgtcatatg gcagagagag agagagagag 600
a 601

```

```

<210> 81
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> A, G, or neither (single base deletion) may be
      present

```

```

<400> 81

```

```

gaaagtgagg gcgtttccct ggctgttagg ccagaaatca tattcctata ttttctttga 60
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cttagctgcc atgacaaaat accataggct ggatgcatta aacaatggaa atttagtttt 180
tcacaggtct gggagctggg aagtttaaga tgagagtgcc agcatggttg ggttgtagtg 240
agggctctct ttctggcttg cagatagacc cttctcact gtattgtcat atggcagaga 300
ragagagaga gagagagaga gagagagaga ggggatcttt ctcttgcttt ctattataag 360
gccatagtcc tgttggatca gggttccatt cttatgactt tatttgactt tcccccccta 420
agatgctatc tccagatata atcacacggg ggggttagggc ctcaacattt ggatttgagg 480
gggacacagc tcagtccata gcaaaggata atgcagaggg ttggatattt aaaagtagct 540
acacaatttt taatataaat attttatggt aacttttttt tttttttgag atggagtcta 600
g                                                                 601

```

```

<210> 82
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 82
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tagggcctca acatttggat ttgggagggg cacagctcag tccatagcaa aggataatgc 180
agaggggttg atatttaaaa gtagctacac aatttttaat ataaatattt tatggtaact 240
tttttttttt tttagatgg agtctagctc tggtgcccag gctggagcgc aatggtgcga 300
dctcagctca ctgcaacctc cgctcccag gttcaagcaa ttctcctgcc tcagcctcct 360
gagtagttgg gactataggc acgcgccacc acgcctgggt attttttttt tatttttact 420
agagacgggt ttgcaccata ttggtcaggc ttgtctcgaa ctcttgacat cagggtgatcc 480
acccatcttg gcctcccaaa gtgctgggat tacagaagtg agccaccgcg cctagccagc 540
agctttactg agatgtaatt cacatgccat aaattcactt ttctaaagta tacaattcag 600
t                                                                 601

```

```

<210> 83
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> T may be either present or absent

```

```

<400> 83
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ccatagcaaa ggataatgca gaggggttga tatttaaaag tagctacaca atttttaata 120
taaataatttt atggtaactt tttttttttt ttgagatgga gtctagctct gttgcccagg 180
ctggagcgca atgggtgcgat ctgagctcac tgcaacctcc gcctcccagg ttcaagcaat 240
tctcctgcct cagcctcctg agtagttggg actataggca cgcgccacca cgcctggcta 300
tttttttttt atttttacta gagacggggt tgcaccatat tggtcaggct tgtctcgaa 360
tctgacatc aggtgatcca cccatcttgg cctcccaaag tgctgggatt acagaagtga 420
gccaccgcgc ctagccagca gctttactga gatgtaattc acatgccata aattcacttt 480
tctaaagtat acaattcagt gacttaaaac atttatttat ttttaaattg acagaattac 540
atgtatttat catgtacaac atgatgtttt gaagtatatg tacattgttg agtgactaag 600
t                                                                 601

```

```

<210> 84
<211> 601
<212> DNA

```



<213> Homo sapiens

<400> 84

```
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accatacccg actcccaaag tattctgctc tctgcttcta tgagattaac tttttctgat 180
tccacatgag tgagatcatg cagtatttat ttgtctttac ctggcttatt tcattcatat 240
tgttacagat aacaggattt ccttcttttt ttaatggccg aatagttttc tattgtatat 300
rtatagcaca ttttctctct tcatgcattg gtggacactt aggttgattc cgtatcttgg 360
ctatcgtgaa tagtgctata atgaacatgg gaatgcacat ggctctttga catattgatt 420
tcattttata tatgtgtata tatatatgta tacacacaca tacatacagt ggtgggattg 480
caggatcata tggtagttct atatttaatt tttaaaggaa ctccatactg ctttccataa 540
tggtgtatt agtttaactc ctcaccaaca gggtgcaaaa gttccctttt ctctacatac 600
t 601
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<210> 85

<211> 601

<212> DNA

<213> Homo sapiens

<400> 85

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tcctttcaga cgtattaatg gtttttattt tattttattt gttgttggtg ttgttggtgt 180
tggtgttttt gagacggagt ctactctgt caccaggctg gagtgcagtg gcagggtctc 240
ggctcactgc agcccccgtc tcacggttca agcgattctc ctgcctcagc ctcccgagtc 300
rctgggacta caggcgcatg ccaccacgcc cagctaattt ttgtattttt agtaaagacg 360
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ggcctcccaa agtgcctggga ttacaggtgt gagccaccac ccctggccaa tgtttggtat 480
ttatcttttag gtgctctgat gttgggttca tatatattta taaaaaacia tagctacata 540
acttattaag ggatatgcaa tataaaatat ataaattgtg aactgaaaa tttaaaatgg 600
g 601
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<210> 86

<211> 601

<212> DNA

<213> Homo sapiens

<400> 86

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tttattttat tttatttggt gttgttggtg ttgttggtgt tgtttttgag acggagtctc 180
actctgtcac caggctggag tgcagtggca gggctctcggc tcaactgcagc ccccgctctc 240
cggttcaagc gattctcctg cctcagcctc ccgagtcgct gggactacag gcgcatgcca 300
ycacgcccag ctaatttttg tatttttagt aaagacgggg tttcaccatg ttggccagga 360
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cagggtgtgag ccaccacccc tggccaatgt ttggtattta tctttagggt ctctgatgtt 480
gggttcatat atatttataa aaaacaatag ctacataact tattaaggga tatgcaatat 540
aaaatatata aattgtgaca ctgaaaattt aaaatgggag gagtggagta aaagtacctt 600
c 601
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<210> 87

<211> 601

<212> DNA

<213> Homo sapiens

<400> 87  
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 ggatatgcaa tataaaatat ataaattgtg acactgaaaa tttaaaatgg gaggagtggga 180  
 gtaaaagtac cttcatataa cttactatta tatcctctta ttgaattgac ccttttatca 240  
 ttatatagga actttgtttc tcctttacaa cttctgactt aaagtttggt ttatatgata 300  
 yaagtaaagt tactcctgct ctcttttggg ttctgtttcc atggaatata tttttccatt 360  
 ccttcaccat cagtctgtgt gtattttttac agatgaaatg agtctgtcat gggcagcata 420  
 tagttggatc tagttttttt aatccactca gacactgtgt tttttgattg gataatttaa 480  
 tccattcatg ttcaaggtaa ttattgataa gtaaggactt tgtactacca ttttgcttat 540  
 tgtttcatgg ttctttttata gatcctttat tcttttcttc ctctcttgct gtcttttttt 600  
 t 601

<210> 88  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 88  
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 attttaactt gataacttaa tttttattgc aaaaaccccc caaaacaaaa aaatctacac 120  
 ttttacttaa tccctgaaa ttttgaattt ttgatgtcac agtttacctc ttttcatatt 180  
 gtgtatccct taaattattg tagctattat tacttttaat agttttctct ttcctactac 240  
 agatgtaagt gatttgcata ccatcattac agtattattt tgaatttacc tgtgtacttt 300  
 yttttatcag ccagttttat actttcagat gtttttgtgt tactcattag catctttttc 360  
 tttcagcttg aggagctcct tttacgtttc ttataaaata ggtgcgggtca tgattatctc 420  
 cctcagctat tgtttgtctg ggaaagtatc tctccttcat ttctgaagga cactttgctg 480  
 ggtacattac ccttggttgg tatttttctc cttgaacgct ttaaataatat catccctttc 540  
 tctcctgacc tgtttaggtct ctgctgacca gtctgtttcc aaccatattg ggactgtctt 600  
 a 601

<210> 89  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 89  
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 gaagtgatat ctcatggctt tgatttatat ttctttcatg gctagtgtact tttttgtac 120  
 ttttgggata ttgttattat tattattatt attactagtg tttatacttc ttcagtaaaa 180  
 gtgttagaaa caatttttaa aggcagaatg tgaccagagt ttctgtagt tatataacca 240  
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 sttgttttct tccatttcac tgtctctttg tgtcccaaac ttgaattcat gggaaaaaca 360  
 tctgaatggg gcttaatatg gtttggatat ttgtcccctc caaatctcat gttgaaatat 420  
 gacctccagt gttggaagta gggactactt gggtcacgag agtggatcct tcattaatgg 480  
 cttggtaata agtgaactct attagttcat gaaagctggg ttgtgataag agcctggcat 540  
 ctcatttctc ttgtccttct ctcaccatct gacacacttg ctcacctttt ttcttcagcc 600  
 a 601

<210> 90  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 90  
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cagacagtat	atgaaacagg	gaaattagag	gccaaagatac	ctatgactta	tatgtaaaaa	120
tttaaagaaa	atattagcaa	actgaatcag	ccatttttaaa	aaatatacca	caatcaatgc	180
attcataaga	gcagcttaac	aaaatttggt	agaaggcatt	aaagaagact	cagtatagaa	240
aagatgtacc	ttctctccaa	attggtgata	gagattcaat	gccattaaaa	aaacccacct	300
kgtttttttg	aggaacttgt	caagctgagt	ctcaaattta	tatcaaagag	caaaggccta	360
agaatatcca	ggacattcct	gaagaactgt	aaggagccag	gggcctgccc	tatcagatac	420
caagggttgt	tattaagcca	taaccaagtc	agtgtgtgtt	ctacagaaac	agacaagtta	480
acaagtgaag	cataatagag	agcccagaaa	cagacccatc	catatttttg	atttgtcacg	540
tgaaagaagt	agctttgcaa	aactttggga	aaaggagagt	gtgtgcaata	gatgatgctc	600
g						601

<210> 91  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 91						
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tgccattaaa	aaaaccacc	tggttttttt	gaggaacttg	tcaagctgag	tctcaaattt	120
atatcaaaga	gcaaaggcct	aagaatatcc	aggacattcc	tgaagaactg	taaggagcca	180
ggggcctgcc	ctatcagata	ccaagggttg	ttattaagcc	ataaccaagt	cagtgtgtgt	240
tctacagaaa	cagacaagtt	aacaagtga	acataataga	gagcccagaa	acagacccat	300
mcatattttg	gatttgtcac	gtgaaagaag	tagctttgca	aaactttggg	aaaaggagag	360
tgtgtgcaat	agatgatgct	cgtgtcatg	cagacaaaaa	ggaaattggg	atacctgcct	420
cttaccgtac	acaaacacca	acctaaacgt	gaaagttaaa	ctataacagc	ttgagggtgt	480
ggggaagaaa	tatctttatc	tcagtgtagg	gaagaattta	ttttaaaaag	aagacacaaa	540
aggccatata	taggaatgaa	aagattgaat	tcagctgcat	taaaaagatt	aaattcagct	600
g						601

<210> 92  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 92						
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taggaatgaa	aagattgaat	tcagctgcat	taaaaagatt	aaattcagct	gcgttaaaat	120
caagagcatc	tgtacttgga	cagcatagag	tggaaagaca	aagagaaggt	atttgccagc	180
ttataacttg	aaggattaga	atgaatgata	taaagaacta	tgtaaataag	aaaaagacat	240
acaaccggtt	agaaaaacgg	gcaaagacat	gaacagcata	tttcacgtga	aggaaacagc	300
rgtagcaaat	gaacatggta	agagatgctc	aacacgttta	gtaatttgaa	gggaaatgca	360
agttataccc	acagcaagac	tatcttatct	aggaagtttg	tcaataccct	aatgttcttg	420
tggttttaag	ctacagagtt	tgtaattcat	ttatttatct	aataaatact	cagtggcagg	480
cactgtttta	gaaaccttgg	ttataacttt	gaatgaaatt	aaaaaaaaatc	cttgcccttg	540
ggaggatgct	tatgtgtggg	gagttgggtg	gtgggggtcaa	acaacaatta	cattaaaaata	600
g						601

<210> 93  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 93						
acttgaagga	ttagaatgaa	tgatataaag	aactatgtaa	ataagaaaaa	gacatacaac	60
cggttagaaa	aacgggcaaa	gacatgaaca	gcataatttca	cgtgaaggaa	acagcggtag	120
caaatgaaca	tggtaagaga	tgctcaacac	gttttagtaat	ttgaagggaa	atgcaagtta	180

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taccacacagc aagactatct tatctaggaa gtttgtcaat accctaaatg ttctgtggtt 240
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ktttagaaac cttgggtata actttgaatg aaattaaaaa aaatccttgc cttgtggagg 360
atgcttatgt gtggggagtt ggggtggtggg gtcaaacaac aattacatta aaatagaaaa 420
tagtgacata aataaaccta taaatattgc aaccacagag tatattataa atgtaagtag 480
tgactaggac tctcatgcag atatacctct gtgctgggac aaatgaaagt ttaagtgtaa 540
tttcccatat gcaagtcaaa ataaaaagtg acactagaaa acacaataat gaatatctga 600
a                                                                 601

```

```

<210> 94
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 94
ggcatttaag tattctgcca tagggaagtg taaaagttgt aggcttttac tttttatagg 60
tactatatgg tccaaataat ctccagacct catgggtgct aaggatctgt gtccttggtt 120
ggtcagatta tgtttatctc tggcataagg cacttaacaa tattcattaa aggttacaga 180
atctttttgc ttcattctgt tagcatttca taccagtttg ttttccacca aactttcaaa 240
ttttgattgt ttcattaata ttctgcatac tgatgtaaac caagttctat tattgtgcaa 300
wctgctcctg aaacccttag gaactctctg aaggagtttt atttattttt tgtttttgtt 360
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gtggtgcgat ctcggtctct tgcaaaactcg gcctccgggg ttcacgccat tctcctgcct 480
cagccaccgg agtagctggg actacaggca cccaccactg cgctgggcta attttttttg 540
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t                                                                 601

```

```

<210> 95
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> T, C, or neither (single base deletion) may be
present

```

```

<400> 95
ttgagacgga gtcttgctct gttgcccagg ctagagtgc  gtggtgcgat  ctcggtctct 60
tgcaaaactcg gcctccgggg ttcacgccat tctcctgcct cagccaccgg agtagctggg 120
actacaggca cccaccactg cgctgggcta attttttttg tatttttagt agagacgggg 180
tttcaccgtg ttagccagga tgggtctgat ctctgacct tgtaatccgc ccgcctcgcc 240
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gttggtgatt agtgcttctt cagctatgag tataagataa tattatacta gtagttcagt 480
tgcttagata aattgtacac tatgtgaagt tttatttaca taattcttac ggtatttttt 540
aaggtagttg ataacagttg agactacaat tgtatctcca ttttattgat agtaaaatga 600
a                                                                 601

```

```

<210> 96
<211> 601
<212> DNA
<213> Homo sapiens

```

<400> 96  
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tgaaggggtg atgatttgaa acaataacctc tccattagct aaattttata tagaatctat 120  
tgcattgttt aaatgataag tcagatttat aaaaatatatt ttataaacag taggaaatga 180  
gttttaggggt attcacatac agttttaatt tttatttaca tatttaaaac atatcatggt 240  
ataaatatga tgtggatata aatttgagat aaaggaagta ttgtttaaga attgatgaac 300  
kaatttctta aaagatgtca tcaccagttg gttttctagc cttatgaaaa atgggtgcaa 360  
taaaaaagat tgactatgat aaaatgctgc ctttctattt taacctagac caagagaaaa 420  
catactgtga atctatgatg aatgaaagaa agttgtaact gttgggtttg tatatttgta 480  
attactgttt attttctatt cttgtgaact gatactgtac tttgttcatt gtgagtagac 540  
aacttataat ctatgtactc aaattgggtt agtataaatt ctagggaatg aagttcatat 600  
t 601

<210> 97  
<211> 452  
<212> DNA  
<213> Homo sapiens

<400> 97  
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tgacactgtt ttaagccagc attccttcag aatgtaccca aatctcaaaa tttatttagg 120  
ggcaaagcta atgcttttaa gaaaaaggag argggattgg tgtgtgtttt tctttaggaa 180  
cagtagtaac ttgactttta gagaacttga ataagcattt attttttcct ttgtcctatt 240  
ttattgtgaa gtttatttat ttaaaataaa atggatttct ctggaattta gtttctgcaa 300  
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actcactgaa agcttattac ccctgggttat ggtttattac ggggaaaaga tgcggatgaa 420  
aatcagtcaa gtaaagaagc acatagggca ga 452

<210> 98  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 98  
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gtacaaacgt catcaaaatt gctcctgaga cagctgttaa attctgggca tatgaacagg 180  
taattgttat caccctgaga atttattaac aaagaggagt tagtaaacgg attcaataaa 240  
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yccataagga ggatcactta taggagatta gactaaataa aatcagagat ttctcatgac 360  
caagttatgg gattcttaatt tcatcatatt atttataaag tttttttttt ctaagtagtt 420  
cttaaaggaa gggtagaatt ttagtttatt cattctgaat cctgagcaga agcagcacac 480  
taacataagt tttatgaaag tgtcacaatc taacctctgg aaggaaaact ataagttgaa 540  
gtcctttgtg taatttgacg ttgctgtaaa attgagctga gtttgagtg acacctccat 600  
g 601

<210> 99  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 99  
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gtggaattta ttaacaaaga ggagtttagt aacggattca ataaatgtta atgtataatg 120  
cttttgggat tcttgtttta atacatgata atctttcaca tatacccat aaggaggatc 180  
acttatagga gattagacta aataaaatca gagatttctc atgaccaagt tatgggattc 240

ttaattcatc	atattattta	taaagttttt	tttttctaag	tagttcttaa	aggaagggtta	300
kaatttttagt	ttattcattc	tgaatcctga	gcagaagcag	cacactaaca	taagttttat	360
gaaagtgtca	caatctaacc	tctggaagga	aaactataag	ttgaagtcct	ttgtgtaatt	420
tgacgttgct	gtaaaattga	gctgagtttg	gagtgcaccc	tccatgaagg	caggggcgtg	480
gcttcttccc	catgtactcc	agcacctaga	cagagcttgg	catgtgataa	gtttcaagcg	540
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c						601

<210> 100  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 100						
tgggattcct	gttttaatac	atgataatct	ttcacatata	ccccataagg	aggatcactt	60
ataggagatt	agactaaata	aaatcagaga	tttctcatga	ccaagttatg	ggattcttaa	120
ttcatcatat	tatttataaa	gttttttttt	tctaagtagt	tcttaaagga	agggtagaat	180
tttagtttat	tcattctgaa	tcctgagcag	aagcagcaca	ctaacataag	ttttatgaaa	240
gtgtcacaa	ctaacctctg	gaaggaaaac	tataagttga	agtcctttgt	gtaatttgac	300
rttgctgtaa	aattgagctg	agtttgaggt	gacacctcca	tgaaggcagg	ggcgtggcct	360
cttccccatg	tactccagca	cctagacaga	gcttggcatg	tgataagttt	caagcgagtg	420
ttgaatgagt	caatgaatga	acaaatgcat	ttacctctga	atcacttctc	tgctcggttt	480
tgttaaacttg	gattatttga	gctattgctt	cagcctaact	caatgtaaag	gggaaatata	540
gaggtaagtt	ttagagtttg	ggttctcttt	atggtcatta	gcagaactgt	ctagttgagc	600
a						601

<210> 101  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 101						
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agtagttcct	aaagggaagg	tagaatttta	gtttattcat	tctgaatcct	gagcagaagc	180
agcacactaa	cataagtttt	atgaaagtgt	cacaatctaa	cctctggaag	gaaaactata	240
agttgaagtc	ctttgtgtaa	tttgacgttg	ctgtaaaatt	gagctgagtt	tggagtgaca	300
sctccatgaa	ggcaggggcg	tggttctctc	cccatgtact	ccagcaccta	gacagagctt	360
ggcatgtgat	aagtttcaag	cgagtgttga	atgagtcaat	gaatgaacaa	atgcatttac	420
ctctgaatca	cttctctgtc	ggcttttggt	aacttggatt	atgttgagcta	ttgcttcagc	480
ctaactcaat	gtaaagggga	aatacagagg	taagttttag	agtttggggt	ctctttatgg	540
tcattagcag	aactgtctag	ttgagcagcc	acagattatg	ttttccatta	tttattccat	600
c						601

<210> 102  
 <211> 601  
 <212> DNA  
 <213> Homo sapiens

<400> 102						
ataaggagga	tcacttatag	gagattagac	taaataaaat	cagagatttc	tcattgacca	60
gttatgggat	tcttaattca	tcataattat	tataaagttt	tttttttcta	agtagttcct	120
aaagggaagg	tagaatttta	gtttattcat	tctgaatcct	gagcagaagc	agcacactaa	180
cataagtttt	atgaaagtgt	cacaatctaa	cctctggaag	gaaaactata	agttgaagtc	240
ctttgtgtaa	tttgacgttg	ctgtaaaatt	gagctgagtt	tggagtgaca	cctccatgaa	300
sgcaggggcg	tggcttcttc	cccatgtact	ccagcaccta	gacagagctt	ggcatgtgat	360

```

aagtttcaag cgagtgttga atgagtcaat gaatgaacaa atgcatttac ctctgaatca 420
cttctctgtc ggcttttgtt aacttggatt atttgagcta ttgcttcagc ctaactcaat 480
gtaaagggga aatacagagg taagtttttag agtttgggtt ctctttatgg tcattagcag 540
aactgtctag ttgagcagcc acagattatg ttttccatta tttattccat cattgtttat 600
c 601

```

```

<210> 103
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> variation
<222> (301)...(301)
<223> C may be either present or absent

```

```

<400> 103
gcacctagac agagcttggc atgtgataag tttcaagcga gtgttgaatg agtcaatgaa 60
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tgagctattg cttcagccta actcaatgta aaggggaaat acagaggtaa gtttttagagt 180
ttgggttctc tttatggcca ttagcagaac tgtctagttg agcagccaca gattatgttt 240
tccattattht attccatcat tgtttatcaa ggactgtaag ggccttgaaa ttcaactccc 300
ccccccatag tttttgtatt attccatgta gatttttagat tattctggag agtgttttgt 360
tcttgagcaa cagaatactc ttgagaagat tacgaagtcc agtggatatcc ttttctttgc 420
ctaggaaata gagaagcaaa aaaaaaaaaa aaaaaaaatt aaagaaaatc tagtctccag 480
gattttaatt agaacctatc cttgggaagg ctattttcct tatatgaagg tttgaagatt 540
caaatcatga ttattaaggg ctaatgtttg agataccctt aggttattct gaccacatac 600
t 601

```

```

<210> 104
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 104
catttacctc tgaatcactt ctctgtcggc ttttggttaac ttggattatt tgagctattg 60
cttcagccta actcaatgta aaggggaaat acagaggtaa gtttttagagt ttgggttctc 120
tttatggcca ttagcagaac tgtctagttg agcagccaca gattatgttt tccattattht 180
attccatcat tgtttatcaa ggactgtaag ggccttgaaa ttcaactccc ccccccatag 240
tttttgtatt attccatgta gatttttagat tattctggag agtgttttgt tcttgagcaa 300
sagaatactc ttgagaagat tacgaagtcc agtggatatcc ttttctttgc ctaggaaata 360
gagaagcaaa aaaaaaaaaa aaaaaaaatt aaagaaaatc tagtctccag gattttaatt 420
agaacctatc cttgggaagg ctattttcct tatatgaagg tttgaagatt caaatcatga 480
ttattaaggg ctaatgtttg agataccctt aggttattct gaccacatac ttggatttta 540
tgataggaaa gccacagcct aaaataaata aatactcaat gcagttattt cagtatgcaa 600
g 601

```

```

<210> 105
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 105
gattattctg gagagtgttt tgttcttgag caacagaata ctcttgagaa gattacgaag 60
tccagtggta tctttttctt tgcctaggaa atagagaagc aaaaaaaaaa aaaaaaaaaa 120
attaaagaaa atctagtctc caggatttta attagaacct atccttggga aggctatttt 180

```

```

ccttatatga aggtttgaag attcaaatac tgattattaa gggctaattgt ttgagatacc 240
cttaggttat tctgaccaca tacttggatt ttatgatagg aaagccacag cctaaaataa 300
rtaaatactc aatgcagtta tttcagtatg caagaagttt ggtatTTTTg aaaaagtcca 360
tgggtattgc aagcaaatat gcacattttg ctttatgccca tttgtcagat tcttaccttg 420
gataccacca acaggcatcc tctgcttctg tccacccaag ctccctcctg agacctcttt 480
atagtattgt gatttctgca cactaacttt cttagacatg aagagaaagc tgtctacaca 540
gtgtggtgta gttttcttat gggctctgga cctatggtgc tgttttctct cctcctgctg 600
a 601

```

```

<210> 106
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 106
tgaccacata cttggatttt atgataggaa agccacagcc taaaataaat aaatactcaa 60
tgcagttatt tcagtatgca agaagtttgg tatttttgaa aaagtccatg ggtattgcaa 120
gcaaatatgc acattttgct ttatgccatt tgtcagattc ttaccttggg taccaccaac 180
aggcatcctc tgttctgtgc caccacagct ccttcctgag acctctttat agtattgtga 240
tttctgcaca ctaactttct tagacatgaa gagaaagctg tctacacagt gtggtgtagt 300
kttcttatgg gctctggacc tatggtgctg ttttctctcc tcctgctgaa ggtccattca 360
tccctcgggg ctctctaaaa gccaccttcc tgtgacaagc atatactaag catctcaatc 420
aaagccagtt cctccctgt ccagcctccc tcgagtgtg aattgcagaa tatcccattt 480
ttcattggat gatggaaaac ccattgtttt cccagtggat tgtaaattac ttcggggtaa 540
ataggctgta tatattctca aatttcccag agtatgtaac taggtcactt ttagattcag 600
a 601

```

```

<210> 107
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 107
tccatgggta ttgcaagcaa atatgcacat tttgctttat gccatttgtc agattcttac 60
cttgatatac accaacaggc atcctctgct tctgtccacc caagctcctt cctgagacct 120
ctttatagta ttgtgatttc tgcacactaa ctttcttaga catgaagaga aagctgtcta 180
cacagtgtgg ttagtatttc ttatgggctc tggacctatg gtgctgtttt ctctcctcct 240
gctgaaggtc cattcatccc tcggggctct ctaaaagcca ccttcctgtg acaagcatat 300
mctaagcatc tcaatcaaag ccagttcctc cctgtccag cctccctcga gtgctgaatt 360
gcagaatatc ccatttttca ttggatgatg gaaaacccat tgttttccca gtggattgta 420
aattacttcg gggtaaatag gctgtatata ttctcaaatt tcccagagta tgtaactagg 480
tcacttttag attcagatag attttgttcc ttgaatagct agtactttag gaaactaaga 540
aaaagatctt ttcaacctgg tatgtagctc tgtcaaacac atcatcagta tggggtaaac 600
c 601

```

```

<210> 108
<211> 462
<212> DNA
<213> Homo sapiens

```

```

<400> 108
ctcggggctc tctaaaagcc accttcctgt gacaagcata tactaagcat ctcaatcaaa 60
gccagttcct cccctgtcca gcctccctcg agtgcctgaat tgcagaatat cccatttttc 120
attggatgat ggaaaaccca ttgttttccc agtggattgt aaattacttc ggggtaaata 180
ggctgtatat attctcaaat tcccagagt atgtaactag gtcactttta gattcagata 240
gattttgttc cttgaatagc tagtacttta ggaaactaag aaaaagatct tttcaacctg 300

```



```

rtatgtagct ctgtcaaaca catcatcagt atggggtaaa cctgtgttct ctgtggggttg 360
tcattaccat agtagtgta ttgtatcatt gacagtgtaa tagtggtggg tagtgttctt 420
gtgggtttcag ctgccactct gtactgactg ctttccactc ca 462

```

```

<210> 109
<211> 414
<212> DNA
<213> Homo sapiens

```

```

<400> 109
atcttttcaa cctgggtatgt agctctgtca aacacatcat cagtatgggg taaacctgtg 60
ttctctgtgg gttgtcatta ccatagtagt gtcattgtat cattgacagt gtartagtagt 120
ggggtagtagt tcttgtgggt tcagctgcca ctctgtactg actgctttcc actccaacat 180
cttctctctt atctcaacac tgtagggtcta cctgtgtact gtgtgtttca gcatctctgc 240
ttgcatgacc caggagtgcc tcccactcaa tatggccacc atgcatgggc atctttctgc 300
tactccctgt ctctgaccc tgcctccagca acacagacag acacccttcc tctttctata 360
tgtcatatgg tggggaatgc ccttttagtac ttactcagga gttagttcct ctgg 414

```

```

<210> 110
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 110
cattaccata gtagtgtcat tgtatcattg acagtgtaat agtggtgggg agtggttcttg 60
tgggtttcagc tgccactctg tactgactgc tttccactcc aacatcttcc tctttatctc 120
aacactgtag gtctacctgt gtactgtgtg tttcagcatc tctgcttgca tgaccagga 180
gtgcctccca ctcaatatgg ccaccatgca tgggtcatctt tctgctactc cctgtctcct 240
gacctgtctc cagcaacaca gacagacacc cttctcttt ctatatgtca tatgggtgggg 300
ratgcccttt agtacttact caggagttag ttctctgtgg aagccttctg ttctagtttc 360
cttttgttac agcactttca cattgaattc tgacgttctc tgtacttata tgctttgtga 420
gactgtgagc ttcttagggc agtagctact tgtattctta gcaccttgcc cagtgccagg 480
aaacccttat taagtaaagc aaaagacaga actgacagac tgggaattaga gctcaagctt 540
gcctcaatct caagccatta agatgaaggc gagccgggagc tgggtggctca cgcctctaata 600
c 601

```

```

<210> 111
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 111
atagtagtgt cattgtatca ttgacagtgt aatagtgtgg ggtagtgttc ttgtgggttc 60
agctgccact ctgtactgac tgctttccac tccaacatct tcctctttat ctcaacactg 120
taggtctacc tgtgtactgt gtgtttcagc atctctgctt gcatgaccca ggagtgcctc 180
ccactcaata tggccaccat gcatgggtcat ctttctgcta ctccctgtct cctgacctg 240
ctccagcaac acagacagac acccttctc tttctatatg tcatatgggt ggggaatgccc 300
bttagtactt actcaggagt tagttcctct gggaagcctt ctgttctagt ttctttttgt 360
tacagcactt tcacattgaa ttctgacgtt ctctgtactt atctgctttg tgagactgtg 420
agcttcctta ggcagtagct acttgatttc ttagcacctt gccagtgcc aggaaacct 480
tattaagtaa atgaaaagac agaactgaca gactggaatt agagctcaag cttgcctcaa 540
tctcaagcca ttaagatgaa ggggagccgc gcgtggtggc tcacgcctct aatcccagca 600
c 601

```

```

<210> 112
<211> 601

```

<212> DNA  
<213> Homo sapiens

<400> 112

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ccagcctggg caacgtggca aaacccatt tctacaaaa atataaaaat tagttggacg 60
tgggggtgtg tgctgtact caggatgctg aggtgggagg atcacttgag ctcgagaggc 120
agaggttgca gtgagctggg atcacacccat tgcaatctag cctgggtgat agaagagac 180
cttgtctcaa aaaaaaata aataaataaa taaaggggaa gataaggatt ggaaacagaa 240
ggagcagcat gtggacagaa atgtaggcac aagaaggcat cactcactga agagactgaa 300
rgtggttcac tgtgcctcaa gactggtgga gtgtgtttcc ggaaagataa tgatgaaaga 360
gctggacaga taacacagggg ccaaagttaa taggagtctg gattttattc tgaatatggg 420
aggggctatt gtagcatctt atatagggaa gtgaaatgag tacattcaca tttaaggaat 480
atcaacctga aaaaagagtg gagacattgt tgggggagag tgaggtagac tagaggcagg 540
gagaatattt aaataattga ggtaagaaat gatgaacacc agtataaggg gatgtcttta 600
a 601
```

<210> 113  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 113

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tagactagag gcagggagaa tatttaata attgaggtaa gaaatgatga acaccagtat 60
aaggtgatgt ctttaaggaa tggagaaggg aatgaactga gaaatatttt ggaagtagaa 120
tcaacagaac tcaactgact actggatatg gaggtgagaa agagaagagt caagaatgat 180
attctaattt ctaacttgag tgactgcatt caaagagaat acaatatcag gttccatttt 240
gtgcatgctg agtttgagat gtgtgggaca tgtacaggga gctgtccagt aagcaattgg 300
rtatatcagc tagccattaa gagagagatc tttgatagag aggttggtgc tgagttgagc 360
cattggaatg ggcaggatca ctcaagaaga gcttataaat gagaagaatt ctaggaataa 420
gtccaaaggg agaagtaaaa gaagaaactt gcaaaggaca ctgagaagaa atagctcgag 480
ggatgggaga aaatccagag agagggatgg cataggagtc agtgggaagga aacgggtttca 540
tgggggtcag tactactggg tagtgaatat aataagaata tcttttagga tttctcaacc 600
c 601
```

<210> 114  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 114

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tcaggggtgt tttgagggtc cagttaagtc tccttttagga aggttcagtt ctgtagcctt 60
ggcaagttac ttaaagtctc tgtgactatt acctcatctc taagatgggg actaagcttg 120
gtgacatagt ttacataacc aggcacagtg cctgactttt tggctctgtc ctgaagtctt 180
ccctttgtat atgggtatgt tcggggaata ggagcctcaa gcacttatcc tttaaataatt 240
taccctccat cagtcactaa acgtttactc tgtacttttg atagggtgctg tgggggtcca 300
rggtataaaa ggtaccttca aagttactgt taaagtgcag gaagggtttt aagcaaatta 360
tgtttaatga ttttgacaat ctgacatgca ggaaaattaa tagggcctat gcagaagagg 420
agttttatgt aacactctgt agttcaggaa acagagccct tgggaagcag gatctctctg 480
gggaggaatg tctggtatgt gggaatctca tgaaatgata atatacttaa tttttatcat 540
gagcagcaaa acacagattt gctaggagaa agtcatcgta tgttggtgca ttgggcactt 600
t 601
```

<210> 115  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 115  
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caatgtacac caagattcca atttctccat gtccctccca acaccattaa gtggggtggt 120  
ggtctactac tattgtctgt ttgtctgtta ttccctccct cagttctgta agtgtttgct 180  
tcatatattt aggagcttaa tattaggtcc atatgaagtt ataatttctt cctggtaaag 240  
tgacctcatt atcattatgt aatgtccatc ttgtctctct gtgacagttt gtgtcttaaa 300  
rtctattttg tctgatgtaa ttatggccac cccttttctc ttggggttcc cgtttttatg 360  
gaatatcttt ttccatcctt tcactttcag cttatgtgtg tccttagatc taaagtgagt 420  
ctcatagata aggtatagtt gattctgtat gtgttattca ctcagcaatt tataatctttt 480  
agttagggga tttaatccat ttacatttaa agcagttact gatagggaag gacttactgt 540  
tgtcatttgg ctagctacct ttttatcttt gtccctgtggc ttttctgttt ttcccttctc 600  
c 601

<210> 116  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 116  
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gacctattta tcattatgta atgtccatct ttgtctcttg tgacagtttg tgtcttaaaa 120  
tctattttgt ctgatgtaat tatggccacc ccttttctct ttggggtccc gtttttatgg 180  
aatatctttt tccatccttt cactttcagc ttatgtgtgt ccttagatct aaagtgagtc 240  
tcatagataa ggtatagttg attctgtatg tgttattcac tcagcaattt atatctttta 300  
rttaggggat ttaatccatt tacattttaa gcagttactg atagggaagg acttactgtt 360  
gtcatttggc tagctacctt tttatctttg tcctgtggct tttctgtttt tcccttctc 420  
tcttctctggc ttcttctgtg ttttgttgat tttttttttt tttgtagtga tatgttctga 480  
ttcccttctc atttcccttt gtgtgcattc tatagatgct atttttgtgg ttaccattgc 540  
aactacataa agcatactaa agttatagca acttatttta agctgtttac aacttaactt 600  
c 601

<210> 117  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 117  
gactgaaatt cagacacatg cagtctgatt ctaaccctcc tgtctgccag ctctgatcca 60  
gaactttgca tgactgatac ggctgataga ttgtctatgg ctgatagact gtcatttctg 120  
acctaaaagt ctgatcattt tacatctgtt cagacatctt tgcagccttt cgggtgcagt 180  
tccaaagttg ttagtgaggaa tttcaaagcc ttttaataatc tagccccact ttgttcactc 240  
tctgtgtaat aaccacatac aacaattggc tgcactctca tagcacatgg tactcctccc 300  
rttgtcttgg ttgtgccagc aacactgggt ttccgtttct ctccctgctt gttgaggcca 360  
tttccaaggc ccagggtcttt gtgctttttc ccaagcttcc cagagcttct tccatactcc 420  
ccttacttcc tgagatttaa ctgttctctc ttcagcgctt gtctagtaag aaggaggcag 480  
cagcagcact gtggggtggt ggaaagtgtc ccagcttttg agtcagacca ttggatctca 540  
gccctaccat tttctactta gattttttta ggacaaattt ctccatcttt ctaagcctcc 600  
a 601

<210> 118  
<211> 601  
<212> DNA  
<213> Homo sapiens

<400> 118

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tctagcccca ctttgttcac tctctgtgta ataaccacat acaacaattg gctgcatctc 60
catagcacat ggtactcctc cegtgtgtctt ggttgtgcca gcaacactgg ttttcgcttt 120
ctcttcctgc ttgttgaggt catttccaag gccaggtct ttgtgctttt tcccaagctt 180
cccagagctt cttccatact ccccttactt cctgagattt aactgttctc tcttcagcgc 240
ttgtctagta agaaggaggc agcagcagca ctgtggggtg gtggaaagtg taccagcttt 300
rgagtcagac cattggatct cagccctacc attttctact tagatttttt taggacaaat 360
ttctccatct ttctaagcct ccaattgctc acttacaaaa ttgatataac atttaccttg 420
caagattggg atggaaggta attaaccag tatttagaac atagtaatta ataaataact 480
attattacca tcattactat agttaggaca ctactgtta ggtgctatac aaagaggatc 540
ataaaaggga tgttgtcttg ggcttcttgg aataaatgtt gtccttttac tgtatttttag 600
a 601

```

```

<210> 119
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 119
ttgatctca gccctaccat tttctactta gattttttta ggacaaattt ctccatcttt 60
ctaagcctcc aattgtcac ttacaaaatt gatataacat ttaccttgca agattgggtat 120
ggaaggtaat taaccagta tttagaacat agtaattaat aaataactat tattaccatc 180
attactatag ttaggacact cactgttagg tgctatacaa agaggatcat aaaagggatg 240
ttgtcttggg cttcttggaa taaatgttgt ccttttactg tatttttagaa tatcattctg 300
rgtcataatt gtttgttgtc ataataatga aacatacttg aatattaaat taccctcttt 360
ttttattttt tagccatgtt agaaggttcc ccacagctga atatggttgg cctctttcga 420
cgaattattt ccaaagaagg aataccagga ctttacagag gcatcacccc aaacttcatg 480
aagggtgctc ctgctgtagg catcagttat gtggtttatg aaaatatgaa gcaaacttta 540
ggagtaaccc agaaatgatg ttgcattttt tgcttttagcc tgataattga aactttcaac 600
a 601

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<210> 120
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 120
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attgaaactt tcaacaatct ctggagtgac tttttctcct cgaattgaaa caagtctatg 120
gcaaaagaag ctgcattttt ttcacaaaag ggaagatggg aacaatgggc acttcaaaact 180
tttgggctaa attatatgta cacagaaatg ttcaaaatca tagttttaat gtgttttgaa 240
aaggccacac aattatactt tatcttttct taataatcct gcaaactctt gccctgaatc 300
ygaaatctga aaatgtactg gcttgaacaa aatttgtttt gtgtgttaga gttataaaatc 360
attaatcttt atttcgggtg gtttacgttt atgccagttc ctttatattt aaatttcttg 420
ttttatatat ttggaatgtc tttatagatt tctttaaatt tccttataga accattaata 480
gaaaatcatt acatttaaaa tataccttac agcaaaagca tccaaataag tatagggttt 540
atgtccttat ttttctttca gctgaatacg aatgagcaca gtggtggaat ttctgaaggg 600
a 601

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<210> 121
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 121
atcctgcaaa tctctgccct gaatccgaaa tctgaaaatg tactggcttg aacaaaattt 60
gttttgtgtg ttagagttat aaatcattaa tctttatttc ggggtggtta cgtttatgcc 120

```

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agttccttta tatttaaatt tcttggttta tatattttga atgtccttat agatttccttt 180
aaatttcctt atagaaccat taatagaaaa tcattacatt taaaatatac cttacagcaa 240
aagcatccaa ataagtatag ggtttatgtc cttatttttc tttcagctga atacgaatga 300
rcacagtggg ggaatttctg aagggaagtg atgaaattat atttatttca gtgggcactt 360
ttccatttta ccactgtacc attatttggg tcttgagggt atacactaat tttcagtata 420
ttactgttaa attaccaaca caaggcaatt tatttgaaag attccgttta tcttgccatt 480
gctttgaaaa gcagcaggaa acgaaatcct ttgacttgta tcagcttctg cagagcatct 540
ttgttttcct ttgtcctttg tttcctacct tttgaatcag attccgtttt agtcaggaag 600
a                                                                 601

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<210> 122
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 122
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cagcaggaaa cgaaatcctt tgacttggtat cagcttctgc agagcatcct tgttttcctt 180
tgtcctttgt ttccctacct ttgaatcaga ttccgtttta gtcaggaaga cttcctggga 240
ccattcttag taacctgaaa tttctttttt aattgcatga agtggattga tcatgagcaa 300
rtgatgtgct tatttctccc tcaactgttg atatatcttg acttgctgtt ttcaatatgg 360
gcagcacaaa ggtgagagat acatattaat agtagtatgt attactctta tacattagat 420
acctatattt aaatgaaagg cccaatttgt aaacatatac attcatattc tctcttgccc 480
caagttttag gaacatgtta ggatatagga gacttaattt ataataatga gagcattttt 540
ttattttact aaagccattt ttatagtcaa ctatcttttc ttatttgtgt gattagaact 600
t                                                                 601

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<210> 123
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 123
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gtaaacatat acattcatat tctctcttgc cccaagtttt aggaacatgt taggatatag 120
gagacttaat ttataataat gagagcattt ttttatttta cttaaagccat ttttatagtc 180
aactatcttt tcttatttgg gtgattagaa cttagaaaaa tatttactag ttgaagttaa 240
tatcagtttt taatttagtt cttaaactca tttcacttct aataatttct gttataaaatt 300
kccagcattt taatgaaaat ctaatgatgt aataggcatt ttctttattt gaacctacct 360
cttttatttt ctgaaccaa gagaaagatg gactgggtgt tgtgaaacat ttttaaaaaa 420
gtagtttcat ttatatttag tatgtttgat aaatgtctca gtatttttat aatatgataa 480
gcctgggatt ctacttttag gggtatttgg acttttgagt aatatataaa gtgacaatat 540
taagggtacat gatcagctct ttctattttt actcgtaaaa attatggaat tgaataattt 600
t                                                                 601

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<210> 124
<211> 601
<212> DNA
<213> Homo sapiens

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<400> 124
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ttatttgaac ctacctcttt tattttctga accaaaagaga aagatggact ggtgtttgtg 120
aaacattttt aaaaatgtag tttcatttat attagttatg tttgataaat gtctcagtat 180
ttttataata tgataagcct gggattctac ttttaggggt atttgtactt ttgagtaata 240

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tataaagtga	caatattaag	gtacatgatc	agctctttct	atTTTTtactc	gtaaaaatta	300
yggaaatgaa	taatttttgct	aacaactttg	aaattttcaaa	cttctggaaa	atatgaaaat	360
attcattgtt	cattatgaat	ttaaattgta	aggatgaat	gtgatttgtc	tgtacatctt	420
gtatcttttc	caaaaaatga	ttctgtatct	tttggaaaaa	agccgagagt	tgaagatagt	480
atatttctgg	tagtactgaa	tatttactta	cagtttctat	caaaaatata	tatttgtttc	540
taaaattact	tgttttccag	tttttatttt	ttttagagaa	aattcttaag	tctcagtttc	600
c						601

<210> 125

<211> 601

<212> DNA

<213> Homo sapiens

<400> 125

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tgacacaaggc	agctctgtgt	gcaattgcc	gcatctgctc	ctctgttctc	agggaaatctt	180
tgtagaaaa	atgctgccat	atttgtttct	cacctattag	tcttgtctcc	cagtcaagag	240
aataaattta	tgcaagcaga	gattgtactt	tacagtattt	tgtctttgag	cttggcatta	300
kgttgcattt	gtaaaaaatgt	ggcatggctt	cctcatcccc	caataggaac	tttgccagcc	360
cttttgttct	catggaactt	ccttttttga	aaagagcacc	aaaggagtaa	aaatactgtg	420
gaggagca	ccctcctttg	ccatatgctc	tcattgggag	acatgtggag	cagtctgaag	480
tcatttaggc	cactctctgg	gagagcacat	cctatgatgt	tctcccagcc	tagcccccttc	540
cactgtgctc	aagtccaagc	tgaccagctt	tctgaccaca	gtgtaaacia	agatgattgt	600
c						601

<210> 126

<211> 494

<212> DNA

<213> Homo sapiens

<400> 126

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tgccataattt	gtttctcacc	tattagtctt	gtctcccagt	caagagaata	aatttatgca	120
agcagagatt	gtactttaca	gtattttgtc	tttgagcttg	gcattagggt	gcatttgtaa	180
aaatgtggca	tggcttcctc	atcccccaat	aggaaactttg	ccagcccttt	tgttctcatg	240
gaacttcctt	ttttgaaaag	agcaccaaaag	gagtaaaaaat	actgtggagg	gagcaaccct	300
yctttgccat	atgctctcat	tgggagacat	gtggagcagt	ctgaagtc	ttaggccact	360
ctctgggaga	gcacatccta	tgatgttctc	ccagccctagc	cccttcact	gtgctcaagt	420
ccaagctgac	cagctttctg	accacagtgt	aaacaaaagat	gattgtcagt	gggccccaga	480
atcctatacc	caga					494